

Bulletin

Public Speaks Out on Traffic Safety

In January 1996, the Washington Traffic Safety Commission staff surveyed a randomly selected sample of Washington's residents. The response from 864 people: 43 percent of the people surveyed brought some interesting results which highlight citizen's concerns and recommendations. The sample is statistically valid for the statewide audience with a margin of error of plus or minus 4 percent. Key points were:

- ✓ 57 percent supported suspension of the driver's license for drunk driving.
- ✓ 52 percent favored lowering the blood alcohol content (BAC) to 0.08.
- ✓ 82 percent supported the current motorcycle helmet law.
- ✓ 51 percent supported a bicycle helmet law.

- ✓ A majority supported raising the speed limits on major state highways by 5 mph but did not support a 10 mph increase.

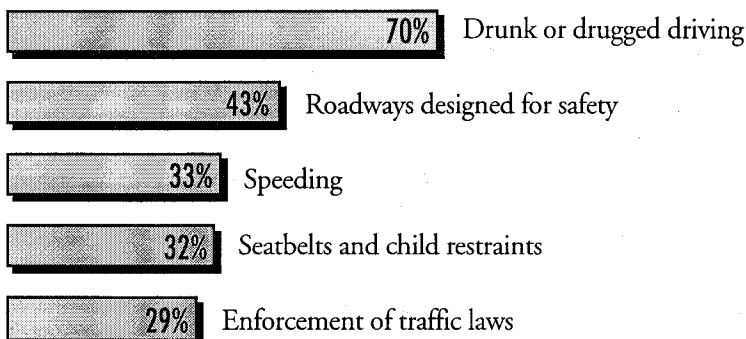
The most important traffic issues brought multiple responses to various issues. People's number one issue was drunk and drugged driving. "Roadways designed for safety" was emphasized by about one-half of the respondents.

The results of the complete survey can be obtained from the Washington Traffic Safety Commission, 1000 South Cherry Street, PO Box 40944, Olympia, WA 98504-0944.



The Northwest Technology
Transfer Center
TransAid-WSDOT

Most Important Traffic Safety Issues



Inside

<i>Editor's Column</i>	2
<i>Forty States Target Metric Conversion for 1996</i>	3
<i>Flagging and Traffic Control Training</i>	3
<i>In the News</i>	4
<i>Preparing for Earthquakes</i>	5
<i>T² Center Supports WSDOT's Research</i>	7
<i>Materials Available on Metrics</i>	8
<i>Free Publications</i>	10
<i>Opportunities to Enhance Your Skills</i>	13
<i>SHRP Implementation Catalogue Issued</i>	15
<i>Training Courses Available for Flagging Instructors</i>	15

Editor's Column

A friend loaned me a book of notes by Leonardo Da Vinci, a man of many talents including civil and military engineering. Leonardo, born in 1452 (more than 500 years ago), contributed much to modern day society. He is credited with the first visions of airplanes, helicopters, submarines, multi-barrel rifles, city planning, hydraulic including water supply and many other inventions of mechanical devices.

Leonardo was most renowned however, for his talents as artist and sculpture. Most people know of the "Last Supper" and "Mona Lisa."

So why this piece on Leonardo? We can, like Leonardo, continue to learn and broaden our careers and viewpoints more than we have. Of course, very few people have the ingrained genius of a Leonardo, but considering that only 10 percent of our brains are being used, a tremendous potential remains for us in our life path of continued learning.

Take advantage of the learning opportunities that are listed in this newsletter, join your various professional associations, and be an active participant. Only you can prepare yourself for the demands of your chosen field. Keep in mind that your nonwork activities can also be a source of learning experiences, especially those activities involving your community.

I close with two quotes that bear remembering:

"Education's purpose is to replace an empty mind with an open one"

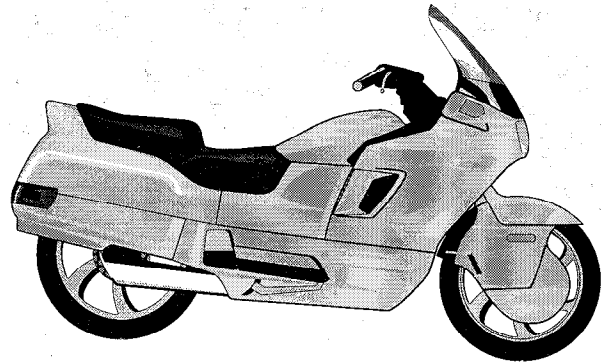
Malcolm S. Forbes

"People will pay more to be entertained than educated"

Johnny Carson

Editor: George Crommes

Motorcyclists Concerned With Joint and Crack Sealants



A recent memorandum from FHWA's Office of Highway Safety was sent to all T² Centers and FHWA Regional Administrators. This memo asked for consideration of motorcyclists when using joint and crack sealants. The following is the memorandum.

"We recently met with representatives from the American Motorcyclist Association (AMA) relative to an emerging safety problem for motorcyclists. They advised that they have received an increased number of complaints from their members regarding loss of control of their motorcycles when traversing sealed joints and cracks, especially longitudinal cracks on curves or if the sealant material is wet.

A review of the correspondence they have received from their members indicates that the state highway agency was usually initially contacted by the AMA member to advise them of the problem. The states contacted included California, New York, Ohio, Pennsylvania, and Utah. The states were most gracious in replying to the complainants and assured them they would review the situation. The general feeling is that in some instances the asphalt joint/crack sealer material and blotting material (or lack of it) may be a problem, but more likely excess application of the crack sealant is the main problem.

This memorandum is to advise you of the problem some motorcyclists are having with wide bands of crack or joint sealant. The state highway agency and local governments performing road maintenance should also be made aware of this situation and should review their sealing practices and the sealant material used with the purpose of reducing the slipperiness and width of sealant band on the pavement surface.

Thank you for your attention to this safety matter."

(Signed by: Frederick G. Wright, Jr.)

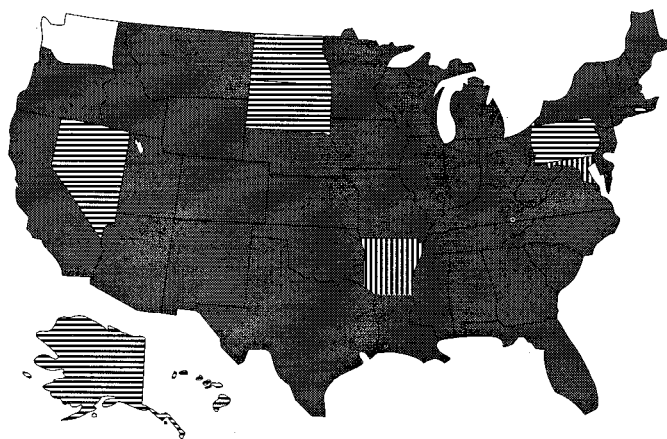
Forty States Target Metric Conversion for 1996





Despite provisions in the National Highway System legislation to give states a longer lead time to implement conversion to metric measurements, most states indicate they will not delay their plans to convert.

So reported 40 states in response to an AASHTO survey. The survey sought to determine the impact of Section 205(c) of the NHS bill (PL 104-59), which extended until September 30, 2000, the deadline for the conversion of state plans and documents to the metric system.

The survey found that of the 49 states responding, only seven (plus the District of Columbia) intend to delay any metric activities, two are undecided, and 40 have no plans to delay conversion activities. All 40 of these states report that they are on schedule to meet the previously established conversion deadline of October 1996 and most agencies are currently engaged in the design and construction of projects in metric units.

(Source: AASHTO Metrication Clearinghouse Newsletter, January/February 1996.)



-  Will not delay in implementation
-  Will delay implementation
-  Undecided
-  No response to survey

Flagging and Traffic Control Training

by Rex Swartz

A new interagency agreement between Labor and Industries, Washington State Department of Transportation, and the Washington State Board of Community and Technical Colleges identifies the process and criteria by which state flagging cards are issued. It does not include flagging cards issued by entities not voluntarily participating in the state card program. The Washington State Traffic Control Flagger card may be recognized by all employers in the state of Washington, Oregon, and Idaho by a 1992 agreement between the three states.

After January 1, 1997, a person wanting a Washington State Traffic Control Flagger card must attend a traffic control flagger class from a Washington State traffic control and flagging certified trainer authorized to issue the state traffic control flagger card. These trainers have a documentation showing their authorization. The trainers may or may not be affiliated with a local community college. Until January 1, 1997, current procedures for getting a state flagging card

apply. State cards obtained before January 1, 1997, may still be honored by employers for their three-year expiration date.

Persons wanting to become a Washington State Traffic Control and Flagging Certified trainer may do so by taking and passing an authorized instructor's course. To date, the Evergreen Safety Council, 1-800-521-0778, has been authorized to train instructors and issue the Traffic Control and Flagging Certified Trainer card.

Persons or organizations wanting authorization to train Traffic Control and Flagging Certified Trainers may do so by having their documented program approved by the Traffic Control Oversight Committee. This committee is charged with the maintenance, modification, and enforcement of the criteria and setting procedures for these Flagging and Traffic Control Training functions. For more information, contact Rex Swartz, Washington State Department of Transportation, at (360) 705-7099, or Roger Dickey, Department of Labor and Industries, at (360) 902-5476.

In the News

✓ John Trent Elected President of NACE

The National Association of County Engineers' (NACE) new president is John Trent, the Public Works Director of Pierce County. Mr. Trent has been the Pierce County Public Works and Utilities Director since 1990. Prior to that, he was Assistant Public Works Director and County Engineer from 1986 to 1990. ■

✓ Researcher Awarded \$500,000

David Yonge, research investigator at Washington State University, has been awarded a National Cooperative Highways Research Program's grant of \$500,000 to investigate Wetland Detention Pond Design for Highway Runoff Pollution Control. The early work leading to this national study was supported by WSDOT research efforts. ■

✓ Yakama Indian Nation Aerial Survey Completed

WSDOT's Aerial Photography Section at the end of 1995 completed and delivered the third phase of a project for the Yakama Indian Nation. It is the single largest project ever attempted by the Section — 5,007 color negatives covering 2,000,000 acres and 10,014 color contact prints each with a labeled Global Positioning System coordinate on the back of the print. ■

✓ APWA Seeks International Exchange Officials

APWA is undertaking an exchange program in public works to foster cooperation among the world's countries.

Mr. Geoff Greenough, past president, is leading the effort with assistance from the Public Administration Service (PAS). A non-profit domestic and international management consultant firm, PAS was established in the 1930s by APWA and others.

The initiative is being formulated, and it could take many forms including exchanges of public works officials, brief working visits, or extended consulting engagements.

APWA and PAS will be attempting to secure financial support from the program since it is expected that travel and subsistence costs will be underwritten. Personal services may be provided on either a remunerated or voluntary basis depending on circumstances.

Active or retired APWA members who are interested in participating in this program as (1) committee members or (2) as active participants who will travel to other counties, should contact the APWA Washington, DC, office at 1301 Pennsylvania Avenue, NW, Washington, DC 20004. Fax (202) 737-9153. ■

✓ NACo's Leadership Guide Available

The National Association of Counties (NACo) has a new comprehensive guidebook entitled "Making a Difference: A Guide for Effective County Leaders."

The purpose and content of the guide is best described by this paragraph from the guide's preface: "To help newly elected officials enhance their effectiveness, this guide has been prepared. Designed to supplement materials that most officials receive from their state association of counties, it attempts to bring a national perspective to county leadership. This guide contains both educational articles and reference tools to assist an elected official (and municipal officials as well) master some of the basic components of effective leadership."

The exhaustive work was put together by Sharon Lawrence, NACo's Director of Research, and should be very useful to all county officials, particularly newer officials. The guide can be obtained from NACo at (202) 393-6226. Additionally, the Washington State Association of Counties (WSAC) has a copy which can be photocopied and sent to any Washington county official upon request.

(Source: WSAC's "The Courthouse Journal," May 12, 1995.)

Preparing for Earthquakes

By Terry R. Simmonds

Shake, rattle, and roll. No it is not the return of Elvis Presley. You have just experienced an earthquake. **ARE YOU READY?** Earthquakes generally strike without any warning. In 1989, an earthquake in the San Francisco Bay area of 7.1 magnitude killed 63 people and caused over \$7 billion in damage. In 1994, a 6.6 earthquake striking the Los Angeles area killed 61 people, injured 8,335, left thousands homeless, and caused over \$30 billion damage. Washington experiences earthquakes every day, but fortunately most of them occur without causing any disruption. However, Washington can and has had devastating earthquakes. **When you ask experts about the possibility of a devastating earthquake affecting Washington, their answer is not if but rather when.**

Prior to an Earthquake — Which Means Now

- 1** Check for hazards that could make your house more dangerous during an earthquake.
 - ☐ Repair defective electrical wiring, leaky gas, and inflexible utility connections.
 - ☐ Bolt down water heaters and gas appliances. Know where and how to shut off electricity, gas, and water at main switches and valves.
 - ☐ Check with local utilities for instructions.
 - ☐ Place large or heavy objects on lower shelves and securely fasten shelves to walls. Brace or anchor high or top-heavy objects.
 - ☐ Store bottled foods, glass, china, and other breakables on low shelves or cabinets that can fasten shut. Anchor overhead lighting fixtures solidly in place.
 - ☐ Check and repair deep plaster cracks in ceilings and foundations. Get expert advice, especially if there are signs of structural defects.
 - ☐ Be sure your house is firmly anchored to its foundation.
- 2** Hold occasional earthquake drills so each family member knows what to do during an earthquake.
 - ☐ Locate safe spots in each room, under sturdy tables or desks, or in strong supported doorways. Reinforce this advance training by placing yourself and your family in these locations.



- ☐ Identify danger zones in each room near windows where glass can shatter or near bookcases or other furniture that may fall over. During an earthquake, each family member should move away from these danger zones to the nearest safe spot.
- 3** Gather emergency supplies and prepare for evacuation if earthquake damage is severe.
 - 4** Develop a family plan for reuniting after an earthquake. Establish an out-of-state telephone contact and leave information for other family members if you must relocate.
 - 5** Review insurance to determine coverage for earthquake damage. Protect important home and business papers.

During an Earthquake

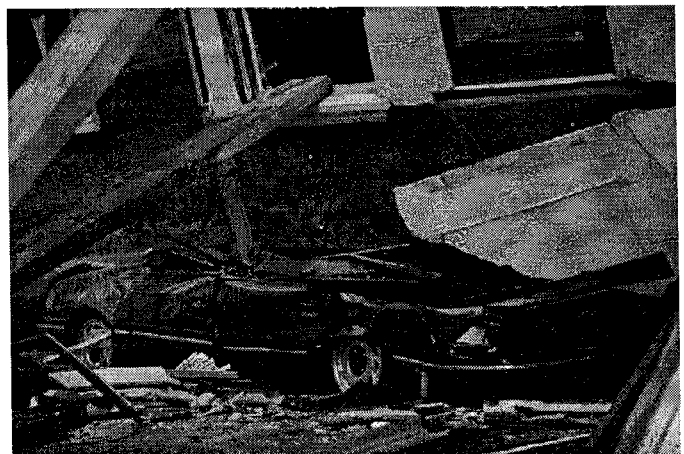
- 1** Keep calm, and stay where you are. Most injuries during an earthquake occur when people decide to enter or **LEAVE** buildings.
- 2** If you are indoors, take cover under a desk, table or bench, against an inside wall or solid heavy framed doorway, and hold on. Stay away from glass, window, outside doors, or walls and anything that could fall and hurt you, such as lighting, furniture, or fixtures.
- 3** If you are outdoors, stay there. Move away from buildings, street lights, and utility wires.
- 4** If you are in a crowded public place, do not rush for a doorway, other people will have the same idea. Take cover, and move away from display shelves containing objects that may fall.

Continued on page 6

- 5 In a high-rise building, get under a desk, away from windows and outside walls. Stay in the building on the same floor. Do not be surprised if the electricity goes out or if sprinkler systems or elevator or fire alarms go on. Do not use the elevators.
- 6 If you are in a moving vehicle, stop as quickly as safety permits, and stay in the vehicle. Avoid stopping near or under building, bridges, trees, or utility wires. Then proceed cautiously, watching for road and bridge hazards.

After an Earthquake

- 1 Be prepared for aftershocks. These secondary shocks are usually less violent than the main quake but can be strong enough to do additional damage to weakened structures.
- 2 Check for injuries. Do not attempt to move someone seriously injured unless they are in immediate danger of death or further injury. If you must move an unconscious person, first stabilize the neck and back, then call for help immediately.
 - ☐ If the victim is not breathing but has good pupil reflex, carefully position the victim for artificial respiration, clear the airway, and commence mouth-to-mouth resuscitation.
 - ☐ Maintain body temperature with blankets. Be sure the victim does not become overheated.
 - ☐ Never try to feed liquids to an unconscious person.
- 3 Stay out of severely damaged buildings. Return to your home when authorities say it is safe to do so.
- 4 Use flashlights or battery powered lanterns. Do not use candles, matches, or open flames indoors after the earthquake because of possible gas leaks.
- 5 Wear sturdy shoes in areas covered with fallen debris and broken glass.
- 6 Clean up spilled medicines, bleaches, gasoline, and other flammable liquids inside buildings. Evacuate the building if gasoline fumes are heavy and the building is not well ventilated.
- 7 Visually inspect utility lines, chimneys and appliances for damage.
 - ☐ If you smell gas, open windows and shut off the main gas valve. Leave the building immediately and report the leak to the gas company. Stay out of the building until authorities have given the OK to re-enter.
 - ☐ If you see electrical damage, switch off all electrical power at the main box.
 - ☐ If you see that water pipes are damaged, shut off the water supply at the main valve.
 - ☐ Do not switch on gas or electricity until the utility company has checked your home.
 - ☐ Do not flush toilets until you know that sewage lines are intact.
 - ☐ Check chimneys for cracks and damage. The initial check should be made from a distance. Approach chimneys with great caution. Have a professional inspect the chimney for internal damage before lighting a fire.
- 8 If water is cut off, use water from water heaters.
- 9 Open doors cautiously. Beware of objects that may tumble off shelves.
- 10 Use the phone only to report a life-threatening emergency.
- 11 Turn on your battery-operated radio (or plug in your radio or television if you still have electricity) to get the latest emergency information.
- 12 Stay off the streets. If you must go out, travel with care. Watch for hazards created by the earthquake, such as fallen objects, downed electric wires, and weakened bridges, roads, and sidewalks.
- 13 Stay away from damaged areas, unless your assistance has been specifically requested by police, fire, or emergency relief organizations.
- 14 If you live near coastal waters, be aware of possible tsunamis, also known as tidal waves. When local authorities issue a tsunami warning, assume that a series of dangerous waves are on the way. Stay away from the beach.



T² Center Supports WSDOT's Research

by George Crommes, P.E.

WSDOT's Research Office has numerous research projects that not only benefit WSDOT, but may also be useful to local agencies. The Research Office has a home page on the Internet which has some selected research projects including one-page summaries of reports published within the last 90 days. The Internet address is <http://www.wsdot.wa.gov/ppsc/research/rpage.htm>. Some examples of WSDOT research that may be of interest to local governments are described in the following.

The Effects of Site Design on Pedestrian Travel in Mixed-Use Medium-Density Environments

Started on January 1, 1996, and estimated to be completed March 31, 1997. The research objectives are: (1) to inventory and characterize pedestrian facilities in common types of medium density, mixed use environments; (2) to measure the effects of site design on the volume of pedestrian trips; and (3) to aid decision makers in the adoption of land-use regulations that support non-motorized transportation. Results of this research can increase the understanding of land use and transportation relationships in planning, design, and regulations.

Stormwater Runoff Benefit/Cost Analysis

This project started January 1995 and is to be completed in May 1996. Overall objective of this research is to provide a decision support framework and criteria that will allow WSDOT personnel to specify stormwater quality improvement projects which satisfy water quality goals at the least cost and with the highest likelihood of success and environmental benefit.

WSDOT Best Management Practices for Stormwater Runoff in Confined Spaces

This project started in December 1995 and is estimated to be completed in June 1997. The objective of the research is to provide information concerning best management practices for stormwater runoff in confined spaces. Maintenance and operational requirements will help to define the most promising ways that this can be accomplished.

Treatment of Vector Solids

The project started February 1, 1996, and will be completed in July 1997. This research will evaluate bioremediation, a common treatment technology for the decontamination of vector solids. The research will assess known processes to determine the most economical process for the decontamination of vector solids. Recent discussions on what an agency can do with vector waste has at times been heated. This research is to provide some answers to what one does with the various vector solids from our roads and streets.

The Relationship Between Side Slopes

The project started in July 1995 and will be completed in September 1996. Design guidelines for roadside slopes in Washington State follow generalized methods and cost/benefit analysis. The actual effects of the current methodology have not been evaluated. This state of the art survey encapsulates applicable recent and ongoing research on clear zones, cross-sections, slope flattening, and other roadside safety features. This represents a first step in the evaluative research process. This research is to provide some answers to relationships of design to accidents especially along side slopes.

Implementing Less Auto-Dependent Urban Form

This project started in January 1996 and will continue through September of 1996. The objectives of this research include: (1) to identify factors from the scientific literature that may contribute to the creation of less auto-dependent urban form; (2) to find and study places that have evolved less auto-dependent urban form over the past 20 years, compare to similar places with more auto-dependent development, and determine the relative importance of factors that have helped bring about the changes; and (3) to produce recommendations for what communities can do to help themselves build less auto-dependent forms.

Predicting the Accident Risks on Highways on the Basis of Roadway Geometrics

This research project is being reviewed for publishing. The primary objective of the research was to test the statistical validity of the accident prediction method WSDOT is developing and utilizing. The findings of this research will be used to develop a weighted equation for use in WSDOT's safety programming. The formula should be appropriate to use in prioritizing a large number of projects without being labor intensive.

Materials Available on Metrics

By Stan Sanders

As the day draws closer when metrics becomes a part of our working life, I am receiving more and more calls from local agencies about training in metrics. The Department of Transportation has had a series of training sessions on metrics over the past two years and, at this time, is not planning to schedule more.

Several training aids are available to local agencies within Washington State. They are in several formats including video tapes, self-study workbooks, and computer tutorials. In addition, metric conversion computer software programs are available. Here are three:

The National Highway Institute (NHI) course, **Metric Training for Highway Agencies**, is now available in workbook format or it can be supplemented with a computer-based self-paced program that runs on virtually any IBM personal computer or clone, Model 286 or newer. After a review of basics, this training course provides further examples of application of metrics to transportation projects. WSDOT employees may get copies of the software from their training coordinators. Washington State local agencies may acquire copies of the workbook free, with instructions on acquiring the software (cost \$30) including a limited site license for the software by contacting Stan Sanders, the T² Center Training Coordinator, at (800) 973-4496 or (360) 705-7477.

This training course for PC users is based on the NHI workbook course, Metric (SI) for Highway Agencies. (SI stands for System International d'Unites, the internationally accepted metric system.) This training course was developed by the NHI in partnership with Workplace Training of Mound, Minnesota. It provides the information in a flexible, interactive, and self-paced format. It has the same content as the workbook for the NHI course and can be used along with the workbook.

Topics covered in the course are Building Blocks for Conversion to SI, Metric (SI) Basics, Overview of SI in the Highway Context, Planning and Roadway Design, Bridges, Drainage, Materials, Quantity/Cost Estimation, and Workshop Challenges and Solutions. A glossary, some useful conversion factors, and a 28-question quiz are also included. A logon feature makes it possible to track who has taken the course. The free workbook contains an application form for local agencies to obtain the diskettes and limited site license.

Metric-X — A DOS-based shareware program which converts an Inch-Pound unit/value to an equivalent metric

unit/value (or vice-versa). This utility converts: temperatures, lengths, square area, cubic volumes (dry or liquid measure), weights, velocities and speeds, energy and power, and wavelength vs. frequency.

HyperCalc — A shareware utility for converting between metric and English units. It runs on PC microcomputers operating with Microsoft Windows. Developed for Utah DOT by Pallas Informatics, Inc., Logan, Utah.

SI Metric for the Workplace — A 113-Minute Video and study guide is available from Training Coordinators or the Technical/Professional program in WSDOT Staff Development at (360) 705-7067.

Local agencies are encouraged to obtain copies of the training aids and set up their own training programs as needed. Small agencies may want to combine their training efforts as appropriate. After receiving the self-study workbooks, the city or county engineer may decide that formal classroom training is unnecessary. The Northwest T² Center can assist in any agency training efforts by calling (800) 973-4496.

On the Internet, WSDOT offers more information on "Moving with Metrics." The address is <http://www.wsdot.wa.gov/metrics/>

Photocopy this.

Please send Metric (SI) Training for Highway Agencies CBT diskettes to me at this address. Enclosed is my payment of \$25 plus \$5 shipping and handling. I understand this is a special price negotiated by the Washington State Department of Transportation. It includes a limited site license for my agency.

Ship to: _____

Phone _____

City/County _____

Address _____

City _____ State _____ Zip _____

Mail this application form and payment to: Workplace Training, 540 North Arm Drive, Mound, MN 55364

Make checks payable to: **Workplace Training**

Phone (800) 472-2564

Finding Dollar's to Comply With the ADA

by Al King, P.E.

Transportation agencies, including WSDOT, cities, counties, and transit agencies are currently facing significant costs to retrofit existing facilities to meet the requirements of the Americans with Disabilities Act (ADA). Within WSDOT, costs for compliance have been estimated at well over \$10 million. Necessary funding has only partially been achieved and all of that comes from state funded transportation programs.

While most federal ADA programs are targeted toward disabled persons, there are two programs which could be accessed for funding ADA compliant facilities. Doing so would benefit a broad cross section of disabled persons. Those programs are outlined below.

Community Development Block Grants — Entitlement Program

This is available to local government agencies in **urban areas over 50,000 population**. This annual program funds a wide range of community and economic development activities specifically authorized in law. Projects must address one of the national objectives of the program:

(1) Benefit low and moderate income people; (2) Eliminate or prevent slums and blight; or (3) When no other financial resources are available, meet other community development needs which are particularly urgent because existing conditions pose a serious and immediate threat to the health and welfare of the community.

Community Development Block Grants — State's Program

These funds are available to **areas under 50,000 population**. This annual program helps fund a wide range of community and economic development activities specifically authorized in law. Projects must address one of the three national objectives of the entitlement programs.

For both programs, funds may be used to purchase and or develop facilities to serve the public. These may include centers for the handicapped, neighborhood facilities, parks, playgrounds, solid waste disposal systems, and sewage

Wetlands and Transportation Conference Set for Tacoma

WSDOT and co-sponsors are presenting a national conference to bring together people from transportation agencies, resource agencies, and the broader scientific community across the country. The goal is to improve the ability of transportation departments to uphold their environmental responsibilities in a way that is both cost-effective and scientifically valid.

"Connections: Transportation, Wetlands, and the Natural Environment," to be held September 18-20, 1996, in Tacoma, Washington, will feature presentations, poster sessions, panel discussions, and vendor displays. The conference offers an opportunity for biologists, consultants, contractors, economists, engineers, planners, policy makers, and regulators to share scientific knowledge and techniques for more efficiently balancing resource protection and public transportation needs. The focus is on biological issues associated with delivering transportation programs, and cost-effective mitigation of environmental impacts.

Participants are expected to be biologists and other technical professionals including regulatory and policy specialists from transportation departments, EPA, USFWS, COE, FHWA, county and city road departments, and consultants who work for these agencies. Five hundred people are expected.

Potential session topics include:

- Biological Monitoring for Wetlands
- Wetland Mitigation Technology
- Field Inventory and Assessment
- Legal Issues
- New Directions
- Wetland Banking
- Fish and Wildlife

Details on potential topics can be viewed on the Internet at: <http://www.wsdot.wa.gov/eesc/environmental/wetlands.htm>.

Contact Judy Stratton, Conference Coordinator, at (360) 705-7490, Fax (360) 705-6833, Internet: Stratton@wsdot.wa.gov or Joanie Pop, Conference Manager, Event Dynamics, Inc., at (360) 357-8044, Fax (360) 786-8125, Internet: eventd@aol.com.

Continued on page 12

Free Publications

For Washington recipients only.

Name _____

Agency _____

Address _____

City and Zip _____

Phone _____

Check those items you would like to order.

- ☐ LTAP News, 1993.
CD ROM listing of major articles from T² Center newsletters from across the country. Must have Microsoft Windows, a CD ROM, and color monitor (IBM compatible only).
- ☐ Unsurfaced Road Maintenance Management, CRREL
After rating unsurfaced roads, the next steps are covered in this special report by the Corps of Engineers.
- ☐ Highway Utility Guide, FHWA
Provides the state-of-the-knowledge on the better practices being employed and addresses the issues when highway and utility facilities share a common right of way.
- ☐ Scrap Tire Utilization Technologies, NAPA
This booklet provides a succinct overview of various uses for scrap tires, barriers to implementation, and sample policy statements on solid waste management of waste tires used in Oregon.
- ☐ State-of-the-Art Survey of Flexible Pavement Crack Sealing Procedures in the United States, CRREL (1992)
Brief 20-page guide summarizes current methods and materials used by contractors and state departments of transportation for crack sealing on flexible pavements. Advantages and disadvantages are stated.
- ☐ Maintenance of Aggregate and Earth Roads, NWT² Center (1994 reprint)
The fundamentals.
- ☐ Traffic Conflict Techniques for Safety and Operation, FHWA
Background information and step-by-step procedures for conducting traffic conflict surveys at signalized and unsignalized intersections.
- ☐ International State-of-the-Art Colloquium on Low-Temperature Asphalt Pavement Cracking, CRREL
Summary of findings of colloquium and a definition of research needs.
- ☐ The Engineer's Pothole Repair Guide, CRREL
Provides facts about causes and costs of potholes, intended for highway engineers, superintendents, and maintenance managers.
- ☐ Geotextile Selection and Installation Manual for Rural Unpaved Roads.
Now back in stock. This is a guidebook for selecting and installing geotextiles.
- ☐ Asphalt Seal Coats, NWT² Center (1994 reprint)
The fundamentals.

___ **Guide to Safety Features for Local Roads and Streets, FHWA (1992)**

Booklet deals with the construction and maintenance practices that will lead to increased safety.

___ **Pavement Management Implementation in Washington's Counties and Selected Cities — A Progress Report**

Documents the results of a survey of Washington counties and cities by Grays Harbor County staff regarding pavement management systems, data collection, and use of this information.

___ **Family Emergency Preparedness Plan, American Red Cross, et. al.**

Step-by-step guide to disaster planning.

Workbooks and Handouts From T² Center Workshops

___ **Part VI Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility, and Incident Management Operations.**

This is the textbook and handouts from the class "Work Zone Safety for Maintenance Operations on Rural Highways."

___ **Functional Assessment of Wetlands**

Textbook from the class. Limited supply.

Brief (One- to Four-page) Handouts

___ **Asphalt Pavement Recycling**

___ **Eye and Face Protection: Safety Goggles**

___ **Guidelines for a Good Chip-Seal Job**

___ **Individual Productivity - Understanding What Makes It Happen**

___ **Know the Dangers of Confined Spaces**

___ **Mitigating Road Hazards**

___ **One-Minute Stress Beaters**

___ **Operator Daily Maintenance of Motor Graders**

___ **Roadway Safety: Where Does it Rank on Your List of Priorities?**

___ **Standing on Your Own Two Feet: and Other Reasons to Use Foot Protection**

___ **Working With Pesticides**

Orders may be faxed, mailed, or phoned to Laurel Gray

Phone: (360) 705-7386, Fax: (360) 705-6858

Mailing Address: NWT² Center, WSDOT/TransAid, PO Box 47390,
Olympia, WA 98504-7390

treatment works, and others. It would seem that transportation facilities open to the public, such as rest areas, offices providing permit services, and the like would be eligible.

More specifically, funds may be used for removal of architectural barriers to the handicapped in public structures. You may be told that buildings for the general conduct of government, such as city halls, county administrative buildings, state capitol, or office buildings, are categorically excluded. However, that exclusion does not apply for removal of architectural barriers for the handicapped.

*Al King is the Innovative Funding Manager for WSDOT's TransAid Service Center. If you are able to use the above information, or have other ideas that you have been successful using and are willing to share, please contact Al at (360) 705-7344 or by e-mail Al_King@wsdot.wa.gov.

ARTBA Construction Safety Management Manual Available

The U.S. Occupational Safety and Health Administration says ARTBA's Construction Safety Management Manual could help qualify highway contractors for significantly streamlined job-site safety inspections.

The agency found the "excellent" 234-page ARTBA Construction Safety Management Manual was "well written" and "addresses the appropriate safety and health criteria for (our) industry."

The manual is the result of almost a year of collaboration between safety specialists at the CNA Insurance Companies and a highway contractors committee assembled by ARTBA. It is designed to meet a road contractor's unique safety and management challenges.

Available to ARBA members for \$79.95 (non-member price is \$154.95). Send payment to: Publications, ARTBA, The ARTBA Building, 1010 Massachusetts Avenue NW, Washington, DC 20001.

(Source: ARTBA Newsletter January 2, 1996)

Environmental Assistance Available Through TransAid

by Larry Roediger, P.E.

Last summer, a new position, Environmental Procedures Analyst, was created within TransAid Service Center. The charge of this position is to identify opportunities for improvements in TransAid's environmental process including streamlining and reducing the compliance burdens upon local agencies. In cooperation with WSDOT's Regional Environmental Coordinators and the Environmental Affairs Office, technical assistance was also available in areas pertaining to the environmental process and environmental difficulties encountered by local agencies.

Last summer, a series of meetings were held around the state with local agencies to determine local agency environmental concerns, issues, and suggestions for improving the environmental process. These meetings identified some areas where TransAid could assist local agencies in improving the process. A number of needs were identified including:

- 1 Additional coordination between the Northwest T² Center and the Environmental Affairs Office to provide more opportunities for local agencies to obtain environmental training.

- 2 Increased availability of environmental/legislative information to local agencies.
- 3 Work with WSDOT's Environmental Affairs Office for the inclusion of local agencies into its wetland mitigation bank program development.
- 4 Work to allow some limited amount of local agency environmental self-certification in the future.
- 5 Revised portions of the *Local Agency Guidelines* to incorporate new environmental requirements, improve clarity, and attempt to streamline the process.

Progress has been made in the area of providing technical assistance and training. For example, the TransAid home page which is a subset of the WSDOT home page has recently been revised to include federal and state environmental legislation and rules in addition to providing considerable environmental technical information. The TransAid home page can be accessed by the Internet through <http://www.wsdot.wa.gov/transaid/transaid.htm>. In addition, work is taking place in the revision process to the *Local Agency Guidelines*.

Opportunities to Enhance Your Skills

For more information or training needs not listed in this bulletin, contact Stan Sanders, Northwest T² Center Training Coordinator, at (800) 973-4496 or (360) 705-7477

Classes and Workshops

Northwest Technology Transfer Center (360) 705-7386

Call Laurel Gray in the T² Center to register for the following three classes or for information on the road shows.

Spring T² Road Shows. March 15-June 28. Throughout the state at local agencies sites. Contact John Easley at (360) 705-7385.

Planning and Design of Pedestrian Facilities (BHW). June 13, Vancouver; June 14, Mount Vernon. Lecture, discussion. No fee. 1 day.

Access Management, Location and Design. September 10-11. Fee to be determined. 2 days.

Human Factors in Traffic Engineering. October 22, Olympia; October 24, Spokane. Fee to be determined. 1 day.

Washington State Department of Transportation, Staff Development Training Opportunities via T² Center (360) 705-7386

A catalog was previously sent to all Washington public works agencies listing available WSDOT classes.

Call Laurel Gray in the T² Center to register. If the class is full or not scheduled at this time, we will put your name on a wait list for future classes.

NW Traffic Institute Traffic Engineering Fundamentals (BIX). June 11-13, Spokane; September 30-October 1, Seattle; November 19-21, Lacey. Lecture, discussion. \$200. 3 days.

TRANSPEED (Transportation Partnership in Engineering Education Development) (206) 543-5539

Stormwater Engineering for Transportation Engineers. June 10-12, Vancouver. Workshop and exercise for hands-on application. \$180, \$350 nonpublic agency personnel. 3 days.

Advanced Traffic Signal Design - Operations and Maintenance. May 20-21, Seattle. Lecture, discussions and practical exercises, lessons learned. \$150, \$300 nonpublic agency personnel. 2 days.

Analysis, Evaluation, and Programming for Roadway Safety. June 5-6, Vancouver. Workshop, instruction and discussion. \$150, \$300 nonpublic agency personnel. 2 days.

Roadway Value Engineering. June 5-7, Seattle. Workshop, with real project exercises and problems. \$180, \$350 for nonlocal agency personnel. 3 days.

Advanced Highway Capacity for Engineers and Planners. June 17-19, Seattle. Workshop, demonstration. \$275, \$445 for nonagency personnel. 3 days.

Washington State Department of Personnel Employee Development and Training Program (Classes open to state and local agency personnel) (360) 586-2720.

Entry Management Development. May 23-24, June 18-21, Olympia. Discussion, workshop. No fee. 4 days.

Managing Job Stress. June 20-21, Olympia. Workshop, lecture. \$80. 2 days.

Internet Basics. May 31 a.m., May 31 p.m., June 14 a.m., June 14 p.m., June 26 a.m., June 26 p.m., Olympia. Hands-on workshop, examples. \$99. 4 hours.

Effective Meeting Management. May 20, June 20, Olympia. Discussion, workshop. \$75. 1 day.

Time Management. June 14, Olympia. Workshop. \$55. 1 day.

Violence in the Workplace. June 17, Olympia. Workshop, lecture, examples. \$45. 1 day.

University of Washington OSHA Training Center (800) 326-7568

OSHA Standards for the Construction Industry, OSHA 500 Trainer Course, June 3-6, September 16-19, Seattle; OSHA Training Center. For individuals to become certified instructors. \$495. 4 days.

OSHA Standards for General Industry, OSHA 501, Trainer Course, May 20-23, September 23-26, Seattle; June 24-27, Portland. OSHA Training Center. For individuals to become certified instructors. \$495. 4 days.

OSHA Standards for the Construction Industry, OSHA 510 September 9-12, Seattle. OSHA Training Center. \$495. 4 days.

OSHA Guide to Industry Hygiene, OSHA 521. July 15-18, Seattle. OSHA Training Center. \$495. 4 days.

Continued on page 14

**Department of Labor and Industries
Consultation and Education Program
(360) 902-5590**

The following is a listing of free L&I classes scheduled through June 1996. Call L&I for a complete list and to schedule participation.

Hazard Waste Operations and Emergency Response. May 22, Tumwater; June 19, Vancouver. Lecture. 1 day.

Accident Investigation. June 11, Tukwila; June 26, Wenatchee; June 19, Vancouver; May 22, Mount Vernon; June 19, Everett; June 3, Walla Walla; June 18, Kennewick; May 29, Yakima; June 26, Bellingham; June 11, Clarkston; May 21, Ephrata. 3 hours.

Bloodborne Pathogens. May 21, June 27, Tukwila; June 12, Tumwater; May 29, Vancouver; June 18, Everett. Workshop, lecture. No fee. 3 hrs.

Accident Prevention Programs. May 21, June 25, Port Angeles; June 4, Tacoma; May 23, June 11, Tukwila; May 23, Vancouver; June 20, Everett; June 20, Tumwater; June 11, Yakima. Workshop, lecture. 1 day.

Confined Space. June 26, Tukwila; June 12, Vancouver; May 29, Aberdeen. Lecture, slides, and video. 3 hours.

Excavation and Trenching. June 13, Vancouver; June 18, Bremerton; June 13, Spokane; June 12, Tukwila; June 4, Tumwater; May 21, Tacoma. Workshop, lecture. 4 hours.

Fall Protection. June 6, Tumwater; June 11, Tacoma; May 22, June 13, Tukwila; June 27, Vancouver; May 28, Spokane. Workshop, lecture. 4 hours.

Hazard Communication. May 21, June 27, Tukwila; June 5, Vancouver; June 26, Tumwater. Lecture. 3 hours.

Lockout-Tagout. May 22, June 25, Tukwila; June 18, Tumwater; June 12, Vancouver; May 29, Aberdeen; May 22, Bellingham; June 6, Yakima. Lecture. 2-3 hours.

**Skill Path Seminars
(800) 873-7545 (913) 362-4241**

Using the Internet. June 4, Seattle; June 5, Olympia; June 6, Everett; June 7, Bellevue; June 10, Wenatchee; June 11, Yakima; June 12, Kennewick; June 13, Spokane; July 8, Tacoma; July 9, Seattle. Live on-line demonstration by the trainer. \$69, \$59 each for four or more. 1 day.

**American Management Association (AMA)
(800) 255-4141**

Basic Supervision Seminar. August 8, Portland, OR; August 9, Seattle. Seminar. \$139. 1 day.

Conferences and Meetings

Blacks in Government Conference. May 29-31, Red Lion Lloyd Center, Portland, OR. Workshops, presenters. \$180 members, \$225 nonmember, \$250. 3 days. (360) 573-9637 (Vancouver), or (206) 325-9339 (Seattle).

Association of Washington Cities, (AWC) Summer Conference, June 11-14, Tri-Cities, 4 days. AWC, (360) 753-4137, Fax (360) 753-4896

Washington State Association of Counties (WSAC) Summer Conference, June 18-21, Red Lion, Kelso, 4 days.

International Road Federation Summer Meeting. August 21-24, Coeur d'Alene, ID. IRF, (202) 554-2106 Conference/Special Events.

Transportation, Wetlands and the Natural Environment Conference. September 18-20, Tacoma, National Conference on balancing the protection of wetlands and wildlife with escalating transportation needs and costs. For transportation planners, consultants, engineers, biologists, contractors, economists, and policy makers. Conference. 3 days, WSDOT, Environmental Affairs Office (360) 357-8044, Fax (360) 705-6833.

Washington Chapter APWA Fall Conference. October 2-4, Wenatchee, 3 days.

Northwest Pavement Management Association (NWPMA) Annual Conference, October 15-17, Spokane, NWPMA (509) 456-3600, 3 days.

Washington State Association of Counties (WSAC) Legislative Conference, November 13-15, Red Lion, Pasco, 3 days.

8th International Conference on Asphalt Pavements, Design, Construction and Performance. August 10-14, 1997, Seattle, 5 days. International Society for Asphalt Pavements (ISAP). (206) 543-5539, Fax (206) 543-2352.

SHRP Implementation Catalog Issued by AASHTO

AASHTO has published a SHRP Implementation Catalog to provide information on the equipment, hardware and accessories necessary to implement the technologies developed under the Strategic Highway Research Program.

The catalog was compiled with the assistance of the Federal Highway Administration's Office of Technology Application. In addition to identifying equipment, hardware, and accessories, the catalog also provides the name of contract persons where more information may be obtained, as well as the approximate cost.

(Source: Adapted from AASHTO Journal, January 12, 1996)



Training Courses Available for Flagging Instructors

A new certification course for flagging instructors, as well as a new training course for flaggers has been developed. The intent of the effort by WSDOT's Work Zone Safety Task Force is to increase the number of qualified flagging instructors to train individuals using a standard course. This should result in high quality traffic control flaggers who understand the fundamentals and responsibilities of flagging. The Flagging Instructor Certification course is conducted by the Evergreen Safety Council. The Council has scheduled these classes monthly since January 1996. For more information, contact the Evergreen Safety Council at 1-800-521-0778.

Expand Your Knowledge

**Use WSDOT's Library — A Free T² Resource.
Information on:**

- Planning
- Design
- Management
- Construction
- Maintenance
- And Others

(360) 705-7750

NW T² Advisory Committee

Walt Olsen, Chairman, County Engineer
Pend Oreille County, (509) 447-4821

Gary Armstrong
City Administrator
City of Stanwood, (360) 629-4577

Randy Hart
Grants Program Engineer
County Road Administration Board
(360) 753-5989

Pierce Harrison, BIA
Yakima Indian Reservation, (509) 865-2255

Phil Barto, Maintenance Engineer
Spokane County, (509) 456-3600

Robert Nesbitt, Senior Engineer
Jefferson County, (360) 385-9160

Tom Rountree, Supervisor
King County Public Works
(206) 296-7395

Craig Olson, P.E.
Transportation Project Coordinator
Association of Washington Cities
(360) 753-4137

Mike Deason, Public Works Director
City of Leavenworth, (509) 548-5275

Bill Kolzow, Assistant Director USFS
(503) 326-3493

Jack Manicke
Maintenance Superintendent WSDOT
(206) 942-2092

Will Kinne
Road Maintenance Superintendent
Pierce County, (206) 596-2953

ExOfficio Members

Timothy Rogers, T² Coordinator
FHWA, (360) 753-9556

Terry Egan, WSDOT Staff Development
(360) 705-7064

Marty Pietz
Research Director
WSDOT TRIP, (360) 705-7974

Mike Marchand, Director
NW Tribal LTAP Center, (509) 359-2290

Staff

George D. Crommes, P.E. T² Director
(360) 705-7390

Laurel Gray, Technical Assistant
(360) 705-7386

Road Show Trainer
(360) 705-7385

Stan Sanders, T² Training Coordinator
1-800-973-4496
(360) 705-7477

Electronic Bulletin Board

(360) 705-6840

Fax

(360) 705-6858

Internet

<http://www.wsdot.wa.gov/transaid/nwt2.htm>

A newsletter of the Local Technical
Assistance Program (LTAP)

Issue Number 50, Spring 1996

The Technology Transfer Center (T²) Program is a nationwide effort financed jointly by the Federal Highway Administration (FHWA) and individual state departments of transportation. Its purpose is to translate into understandable terms the latest state-of-the-art technologies in the areas of roads, bridges, and public transportation to local highway and transportation personnel.

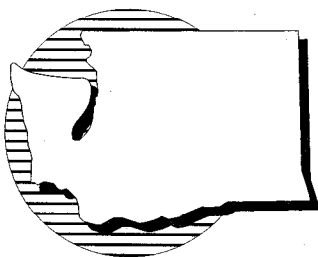
Any opinions, findings, conclusions, or recommendations presented in this newsletter are those of the authors and do not necessarily reflect the views of WSDOT or FHWA. All references to proprietary items in this publication are not endorsements of any company or product.



**Washington State
Department of Transportation**
TransAid Service Center



U. S. Department of Transportation
Federal Highway Administration



Northwest Technology Transfer Center
WSDOT-TransAid Service Center
P.O. Box 47390
Olympia, WA 98504-7390

Address Correction Requested

BULK RATE
U.S. POSTAGE PAID
Washington State
Department of Printing